

REMARKS

Favorable reconsideration of this application, in light of the following discussion and in view of the present amendment, is respectfully requested.

Claims 1, 2, 4-7, 10, 11, 22 and 23 are amended. Claims 1-23 are pending.

I. Objection to the Specification

In the Office Action, at page 2, the specification was objected to. The specification was amended in light of the Examiner's comments, and accordingly, withdrawal of the objection to the specification is respectfully requested.

II. Claim Objections

In the Office Action, at page 3, claims 7, 10, 22 and 23 were objected to. The claims were amended in light of the Examiner's comments, and accordingly, withdrawal of the claim objections is respectfully requested.

III. Rejection under 35 U.S.C. § 112

In the Office Action, at page 4, claims 1, 2, 10, 11 and 22 were rejected under 35 U.S.C. § 112, 2nd paragraph as being indefinite.

Claim 1

Claim 1 was amended in light of the Examiner's comments.

As to the Examiner's assertion that claim 1 does not mention what values are being subtracted from what values, the Applicant respectfully disagrees. Amended claim 1 recites "calculating a first mode checksum by subtracting a second set of values written in a predetermined area of the memory from the first checksum". Therefore, the Applicant respectfully asserts that amended claim 1 does distinguish the values being subtracted from other values.

As to the Office Action's assertion that claim 1 is vague and indefinite with respect to the "if" clauses, the Applicant respectfully disagrees. However, the Applicant has amended claim 1 to more definitely claim that the second checksum is initialized to be zero when the first mode checksum does not meet a predetermined condition and that the inverted second checksum is written in the predetermined area of the memory when the second mode checksum is equal to the second checksum.

The Applicant respectfully asserts that it is unnecessary that claims specifically recite every condition that an element may meet. In particular, if the first mode checksum does not meet a predetermined condition, then a second checksum is initialized to be zero. It is unnecessary for claim 1 to assert what occurs if the first mode checksum does meet a predetermined condition, as amended claim 1 is directed only to initializing a second checksum to be zero when the predetermined condition is not met by the first mode checksum. Further, amended claim 4 asserts what occurs when the predetermined condition is met, by reciting that “the initializing the second checksum further comprises a step of correcting a bit value located just before the written area of the inverted second checksum value, when the predetermined condition is met.” Therefore, “initializing a second checksum to be zero when the first mode checksum does not meet a predetermined condition” is definite.

In a similar argument to that which was asserted above, “writing the inverted second checksum value in the predetermined area of the memory, when the second mode checksum is equal to the second checksum” is additionally definite, specifically when differentiated by claim 2, which recites that “...when the second mode checksum is not the same as the second checksum.”

Claim 2

As to the Examiner’s assertion that claim 2 is vague and indefinite, the Applicant respectfully disagrees. Specifically, claim 2 is related to an iterative operation in that when the second mode checksum is not the same as the second checksum, the second checksum is increased by one, and the calculating the second mode checksum and the increasing the second checksum continues to occur if the second mode checksum is not equal to the second checksum. Further, amended claim 2 recites “...the subsequent increasing of the second checksum by one” to clarify that the operation is iterative.

Claim 10

Claim 10 was amended in light of the Examiner’s comments.

As to the Examiner’s assertion that claim 10 does not mention what values are being subtracted from what values, the Applicant respectfully disagrees. Amended claim 10 recites “calculating a first mode checksum by subtracting a second set of values written in a predetermined area of the memory from the first checksum”. Therefore, the Applicant respectfully asserts that amended claim 10 does distinguish the values being subtracted from other values.

As to the Examiner's assertion that claim 10 is vague and indefinite with respect to the "if" clauses, the Applicant respectfully disagrees for reasons similar to those stated in claim 1 above. The Applicant has amended claim 10 to more definitely claim that the second checksum is initialized to be zero when the first mode checksum does not meet a predetermined condition and that when the second mode checksum is equal to the second checksum, the inverted second checksum is written in the predetermined area of the memory.

The Applicant respectfully asserts that it is unnecessary that claims specifically recite every condition that an element may meet. Therefore, "initializing a second checksum to be zero when the first mode checksum does not meet a predetermined condition" is definite.

In a similar argument to that which was asserted above, "when the second mode checksum is equal to the second checksum, writing the inverted second checksum value in the predetermined area of the memory" is additionally definite, specifically when differentiated by amended claim 11, which recites that "...when the second mode checksum is not equal to the second checksum."

Claim 11

As to the Examiner's assertion that claim 11 is vague and indefinite, the Applicant respectfully disagrees. Specifically, claim 11 is related to an iterative operation. Further, amended claim 11 recites "...the subsequent increasing of the second checksum by one" to clarify that the operation is iterative.

Claims 22 and 23

Claims 22 and 23 were amended in light of the Examiner's comments.

As to the Examiner's assertion that claim 22 does not mention what values are being subtracted from what values, the Applicant respectfully disagrees. Amended claim 22 recites "calculating a first mode checksum by subtracting a second set of values written in a predetermined area of the memory from the first checksum". Therefore, the Applicant respectfully asserts that amended claim 22 does distinguish the values being subtracted from other values.

As to the Examiner's assertion that claim 22 is vague and indefinite with respect to the "if" clauses, the Applicant respectfully disagrees for reasons similar to those stated in claim 1 above. The Applicant has amended claim 22 to more definitely claim that the second checksum is initialized to be zero when the first mode checksum does not meet a predetermined condition and that the inverted second checksum is written in the predetermined area of the memory,

when the second mode checksum is equal to the second checksum. The Applicant respectfully asserts that it is unnecessary that claims specifically recite every condition that an element may meet. Therefore, "initializing a second checksum to be zero when the first mode checksum does not meet a predetermined condition" is definite.

In a similar argument to that which was asserted above, "...when the second mode checksum is equal to the second checksum" is additionally definite.

Therefore, withdrawal of the § 112, 2nd paragraph rejections is respectfully requested.

IV. Rejection under 35 U.S.C. § 101

In the Office Action, at page 9, claims 1-7, 9-15 and 19-23 were rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

As to the Examiner's assertion that the recited conditional language renders the claims as being directed to non-statutory subject matter, the Applicant respectfully disagrees. Claims 1, 2, 4-6, 10, 11 and 22 were amended to change the "if" clauses to "when" clauses to more definitely distinguish the metes and bounds of the claims. Thus, as claims 1, 2, 4-6, 10, 11 and 22 particularly define that the writing is done only when the second mode checksum is equal to the second checksum, claims 1, 2, 4-6, 10, 11 and 22 are directed to statutory subject matter.

As to claim 22, claim 22 was amended to recite "a computer readable medium on which a program for implementing a method of calculating and writing a checksum in a memory is stored, the program causing a computer to execute the method." Further, the specification was amended to further clarify that a computer readable medium may be, for example, a computer readable recording medium.

In addition, it is a "bedrock principle" of patent law that "the claims of a patent define the invention to which the patentee is entitled the right to exclude." Innova, 381 F.3d at 1115; see also Vitronics, 90 F.3d at 1582 ("we look to the words of the claims themselves...to define the scope of the patented invention"); Markman F.3d at 980 ("The written description part of the specification itself does not delimit the right to exclude. That is the function and purpose of the claims."). As has been well established in numerous published patents, a computer readable medium that stores a program which causes a computer to execute operations constitutes statutory subject matter. As long as the computer readable medium stores a program that causes a manmade object, such as a computer, to execute operations, then the claimed subject matter is not non-statutory subject matter.



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Further, the Supreme Court has interpreted the term "manufacture" in accordance with its dictionary definition to mean 'the production of articles for use from raw or prepared materials by giving these materials new forms, qualities, properties or combinations, whether by hand-labor or machinery.'" *Diamond V. Chakrabarty*, 447 U.S. 303, 308 (1980)(Quoting *Am. Fruit Growers, Inc. v. Brogdex Co.*, 283 U.S. 1, 11 (1931)). As the *Chakrabarty* Court observed, the "expansive" scope of the term "manufacture" reflects Congress's intent that patentable subject matter "include[s] anything under the sun that is made by man." *Id.* at 308-09 (quoting S. Rep No. 82-2979 at 5 (1952); H.R. Rep No. 82-1923 at 6 (1952)).

This broad definition of manufacture encompasses electrical signals, which are things made by man. In the electrical arts, a machine, such as a computer produces a signal using electricity (*i.e.* electrons) to carry information. See Harry Newton, Newton's Telecom Dictionary 622 (17th Ed. 2001)(explaining that a signal may be "[a]n electrical wave used to convey information"). The machine transforms the signal into a useful carrier of information by encoding the signal with data through any of a plethora of techniques. Thus, the creation of an electrical signal meets the *Chakrabarty* Court's definition of manufacture: producing a signal from electricity (*i.e.*, electrons) by giving the electricity new forms, qualities and properties through the data encoding process, where the production occurs by a machine. See *Diamond V. Chakrabarty*, 447 U.S. at 308; see also *Dolbear v. Am. Bell Tel. Co.*, 126 U.S. 1, 533-35 (1888) (holding that claims to the use of electricity to carry vocal sounds – *i.e.*, information – were patentable).

Additionally, in Appeal No. 2,002-1554 in the case of *Ex parte Rice* (Application 08/003,996) the BPAI reversed an examiner's rejection of signal claims as being directed to non-statutory subject matter under 35 U.S.C. § 101, holding that electromagnetic signals, although "transitory and ephemeral in nature," are statutory subject matter.

Therefore, withdrawal of the § 101 rejection is respectfully requested.



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Conclusion

In accordance with the foregoing, the specification and claim 1, 2, 4-7, 10, 11, 22 and 23 have been amended. Claims 1-23 are pending and under consideration.

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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